

CLAIMS:

1. An image processing apparatus, comprising:
a background process device configured to process a background of an original image; and
a watermark embedding device configured to embed electronic watermark information into the original image after having been processed by the background process device.
2. The image processing apparatus according to Claim 1, wherein the background process device changes a method of processing the background according to a volume of the electronic watermark information.
3. The image processing apparatus according to Claim 1, wherein the background process device processes the background to be in a non-cyclic pattern.
4. The image processing apparatus according to Claim 1, wherein the background process device processes the background of the original image with respect to one of a plurality of color components of the original image generated by a color separation device separating the original image into the plurality of color components.
5. The image processing apparatus according to Claim 1, wherein the background process device is configured to process the entire background of the original image.
6. The image processing apparatus according to Claim 1, wherein the background process device is configured to process a portion of the background of the original image.
7. The image processing apparatus according to Claim 6, wherein the portion of the background processed by the background process device corresponds to a text area of the plurality of areas, when the original image includes a plurality of areas different from each other in properties.
8. The image processing apparatus according to Claim 1, further comprising:
a background processing area selection device configured to select a portion of the background of the original image to be processed,

wherein the background process device processes the portion of the background of the original image selected by the background processing area selection device.

9. An image processing apparatus, comprising:

a background generation device configured to generate a background for an original image;

a watermark embedding device configured to embed electronic watermark information into the generated background; and

a combining device configured to combine the background in which the electronic watermark information has been embedded with the original image.

10. The image processing apparatus according to Claim 9, wherein the background generation device changes a method of generating the background according to a volume of the electronic watermark information.

11. The image processing apparatus according to Claim 9, wherein the background generation device generates the background to be in a non-cyclic pattern.

12. An image processing apparatus, comprising:

a watermark embedding device configured to embed electronic watermark information into a predetermined background; and

a combining device configured to combine the predetermined background in which the electronic watermark information has been embedded with an original image.

13. An image processing apparatus, comprising:

a background process device configured to process a background of an original image; and

a watermark embedding device configured to embed electronic watermark information into the original image after having been processed by the background process device,

wherein the background process device changes a method of processing the background of the original image according to a volume of the electronic watermark information.

14. An image processing apparatus, comprising:
a background generation device configured to generate a background for an original image;
a watermark embedding device configured to embed electronic watermark information into the generated background; and
a combining device configured to combine the background in which the electronic watermark information has been embedded with the original image,
wherein the background generation device changes a method of generating the background of the original image according to a volume of the electronic watermark information.

15. An image processing method, comprising:
processing a background of an original image; and
embedding electronic watermark information into the original image after having been processed in the background thereof in the processing step.

16. The image processing method according to Claim 15, wherein the processing step changes a method of processing the background of the original image according to a volume of the electronic watermark information.

17. The image processing method according to Claim 15, wherein the processing step processes the background to be in a cyclic pattern.

18. The image processing method according to Claim 15, wherein the processing step processes the background with respect to one of a plurality of color components of the original image.

19. The image processing method according to Claim 15, wherein the processing step processes the entire background of the original image.

20. The image processing method according to Claim 15, wherein the processing step processes a portion of the background of the original image.

21. The image processing method according to Claim 20, wherein the portion of the background processed by the processing step corresponds to a text area of the plurality of areas, when the original image includes a plurality of areas different from each other in properties.

22. The image processing method according to Claim 15, further comprising:
selecting a portion of the background of the original image to be processed,
wherein the processing step processes the portion of the background of the original image selected by the selecting step.

23. An image processing method, comprising:
generating a background for an original image;
embedding electronic watermark information into the background; and
combining the background after the embedding step with the original image.

24. The image processing method according to Claim 23, wherein the generating step changes a method of generating the background of the original image according to a volume of the electronic watermark information.

25. The image processing method according to Claim 23, wherein the generating step generates the background to be in a cyclic pattern.

26. An image processing method, comprising:
embedding electronic watermark information into a predetermined background; and
combining the predetermined background after the embedding step with an original image.

27. A computer program product for controlling an image processing apparatus,
comprising:
a first computer code for processing a background of an original image; and
a second computer code for embedding electronic watermark information into the original image after the background has been processed.

28. The computer program product according to Claim 27, wherein the first computer code changes a method of processing the background of the original image according to a volume of the electronic watermark information.

29. The computer program product according to Claim 27, wherein the first computer code processes the background to be in a cyclic pattern.

30. The computer program product according to Claim 27, wherein the first computer code processes the background with respect to one of a plurality of color components of the original image.

31. The computer program product according to Claim 27, wherein the first computer code processes the entire background.

32. The computer program product according to Claim 27, wherein the first computer code processes a portion of the background.

33. The computer program product according to Claim 32, wherein the portion of the background processed by the first computer code corresponds to a text area of the plurality of areas, when the original image includes a plurality of areas different from each other in properties.

34. The computer program product according to Claim 27, further comprising:
a third computer code for selecting a portion of the background of the original image to be processed,

wherein the first computer code processes the portion of the background of the original image selected by the third computer code.

35. The computer program product according to Claim 27, wherein the computer program product is loadable into internal memory of a computer.

36. A computer program product for controlling an image processing apparatus, comprising:

a first computer code for generating a background for an original image;

a second computer code for embedding electronic watermark information into the background; and

a third computer code for combining the background after embedding by the second computer code with the original image.

37. The computer program product according to Claim 36, wherein the first computer code changes a method of generating the background according to a volume of the electronic watermark information.

38. The computer program product according to Claim 36, wherein the first computer code generates the background to be in a cyclic pattern.

39. The computer program product according to Claim 36, wherein the first computer code changes a method of generating the background according to a volume of the electronic watermark information.

40. A computer program product for controlling an image processing apparatus, comprising:

a first computer code for embedding electronic watermark information into a predetermined background; and

a second computer code for combining the predetermined background after embedding by the first computer code with an original image.

41. An image processing apparatus, comprising:
processing means for processing a background of an original image; and
embedding means for embedding electronic watermark information into the original image after processing by the processing means.

42. The image processing apparatus according to Claim 41, wherein the processing means changes a method of processing the background according to a volume of the electronic watermark information.

43. The image processing apparatus according to Claim 41, wherein the processing means processes the background in a cyclic pattern.

44. The image processing apparatus according to Claim 41, wherein the processing means processes the background with respect to one of a plurality of color components of the original image.

45. The image processing apparatus according to Claim 41, wherein the processing means processes the entire background of the original image.

46. The image processing apparatus according to Claim 41, wherein the processing means processes a portion of the background of the original image.

47. The image processing apparatus according to Claim 46, wherein the original image includes a plurality of areas different from each other in properties, said portion of the background processed by the processing means corresponding to a text area of the plurality of areas.

48. The image processing apparatus according to Claim 41, further comprising:
selecting means for selecting a portion of the background of the original image to be processed,
wherein the processing means processes the portion of the background selected by the selecting means.

49. An image processing apparatus, comprising:
generating means for generating a background for an original image;
embedding means for embedding electronic watermark information into the background; and
combining means for combining the background after embedding by the embedding means with the original image.

50. The image processing apparatus according to Claim 49, wherein the generating means changes a method of generating the background according to a volume of the electronic watermark information.

51. The image processing apparatus according to Claim 49, wherein the generating means generates the background in a cyclic pattern.

52. An image processing apparatus, comprising:
embedding means for embedding electronic watermark information into a predetermined background; and
combining means for combining the predetermined background after embedding by the embedding means with an original image.

53. An image processing apparatus, comprising:
processing means for processing a background of an original image; and
embedding means for embedding electronic watermark information into the original image after processing by the processing means,
wherein the processing means changes a method of processing the background according to a volume of the electronic watermark information.

54. An image processing apparatus, comprising:
generating means for generating a background for an original image;
embedding means for embedding electronic watermark information into the background; and
combining means for combining the background after embedding by the embedding means with the original image,
wherein the generating means changes a method of generating the background according to a volume of the electronic watermark information.